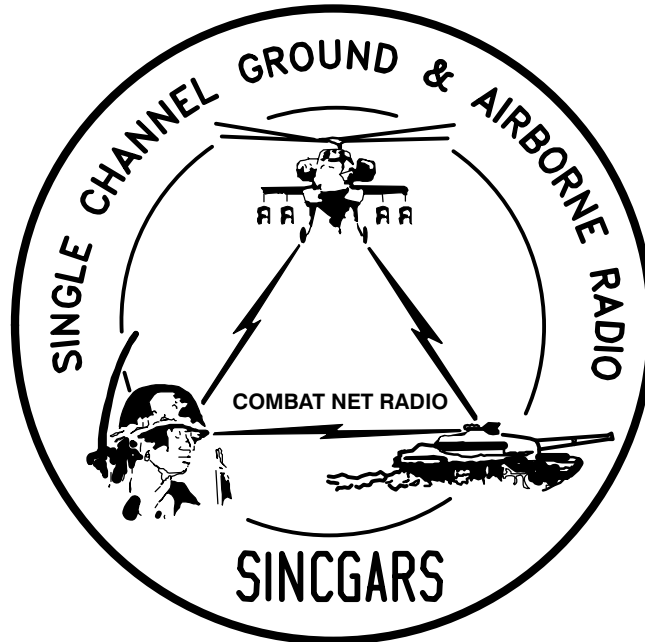


TECHNICAL BULLETIN



**INSTALLATION INSTRUCTIONS FOR
INSTALLATION KIT, ELECTRONIC EQUIPMENT,
MK-2379/VRC (NSN 5895-01-307-5487) (EIC: N/A)
TO PERMIT INSTALLATION OF
RADIO SET: AN/VRC-90 SERIES AND AN/VRC-92
SERIES
IN A
AIRCRAFT CONTROL CENTRAL AN/TSQ-70A**

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

1 AUGUST 1999

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REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command Fort Monmouth, ATTN: AMSEL-LC-LEO-D-CS-CFO, Fort Monmouth, New Jersey 07703-5000. The Fax number is 732-532-1413, DSN 992-1413. You may also e-mail your recommendation to AMSEL-LC-LEO-PUBS-CHG@cecom3.monmouth.army.mil.

In either case a reply will be furnished direct to you.

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*This manual supersedes TB 11-5820-890-20-60, dated 1 September 1993.

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0.1 SCOPE.

This technical bulletin provides Installation Instructions for Installation Kit, Electronic Equipment, MK-2379/VRC, commonly referred to as the Mounting Kit (MK). The MK shall be installed into the following type of shelter(s):

- Aircraft Control Central AN/TSQ-70A

The MK is used for installation of radio set components at field locations. The information contained in this technical bulletin is the official authorization to perform the installation at the unit maintenance level.

NOTES

- This technical bulletin is not an authorization for requisition or turn-in of shelters.
- This technical bulletin does not establish quantity or types of shelters assigned to using units.

This technical bulletin does not contain information on the maintenance or replacement of the MKs. This information is contained in the MAC of TM 11-5820-890-20-2 and RPSTL of TM 11-5820-890-20P.

0.2 GENERAL INFORMATION.

The MK becomes operable when all the radio set components are installed in the shelter and correct power is supplied. Refer to TM 11-5820-890-20-1 or TM 11-5820-890-20-2 for installation, Operational (OP) Check instructions, and required maintenance procedures. Refer to TM 11-5820-890-20P for repair parts.

Included in the Radio Set: AN/VRC-90 Series and AN/VRC-92 Series is:

- Radio Set: AN/VRC-90 Series and AN/VRC-92 Series (for RT-1523(C)/U)

0.3 MAINTENANCE FORMS, RECORDS AND REPORTS.

0.3.1 Reports of Maintenance and Unsatisfactory Equipment. See section 4.2.2.3 for information.

0.3.2 Report of Packaging and Handling Deficiencies. See section 4.2.2.1 for information.

0.3.3 Discrepancy in Transportation Deficiency Report (TDR) (SF361). See section 4.2.2.2 for information.

0.4 CONSOLIDATED INDEX OF ARMY PUBLICATIONS.

Refer to the latest issue of DA Pam 25-30 to determine whether there are new changes, or additional publications pertaining to the equipment.

1. PURPOSE OF INSTALLATION.

The Installation Kit, Electronic Equipment, MK-2379/VRC (MK) contains the items needed to mount AN/VRC-90 Series and AN/VRC-92 Series radio sets in a Aircraft Control Central AN/TSQ-70A (shelter). To install MT-6353/VRC mounting base, see section 5.4 for instructions.

2. END ITEM OR SYSTEM TO BE MODIFIED.

Not applicable.

3. APPLICATION TIMES.

3.1 Time for Completion of Installation. Using one person, a total of 4.0 work hours is required. Typical shelter downtime is 4.5 hours.

3.2 Time for Installation of One Assembly or Component. The following table lists the time required to install one component. All times have been rounded off to the nearest half hour. The sum of these times will not reflect the typical shelter downtime.

ITEM	SECTION	TIME
Antenna AS-3900/VRC	5.1	0.5
Mounting Base, Electrical Equipment MT-6352/VRC	5.2	1.5
Cables	5.3	1.0

4. PREPARATION FOR INSTALLATION.

This section explains how to prepare the shelter and MK for installation.

4.1 Preparation of Shelter. To prepare the shelter for installation, insure that the site includes adequate lighting and a power source when drilling is required. Inspect the shelter for damage that could affect installation. Have any such damage repaired before installing MK.

4.1.1 Items to be Removed. Remove existing AN/VRC-12 radio family installation kit/harness. See TM 11-5820-401-20-2 for removing items used with intercom systems, or TM 11-5820-401-20-1 (used without intercom systems), and TM 11-5895-579-12.

4.1.2 List of Items to be Retained. Not applicable.

4.2 Preparation of MK. To prepare MK, unpack, inspect and check inventory.

4.2.1 Precautions During Handling. Observe these steps to prevent equipment damage.

- a. Keep dust covers in place on connectors.
- b. Do not disassemble or modify parts in MK unless authorized to do so.
- c. Keep mounting hardware covered and protected until needed.
- d. When exposed to moisture, rain or salt water, keep all parts dry to prevent corrosion.

4.2.2 Unpack and Inspect Equipment.

4.2.2.1 Inspect Packaging for Evidence of Damage. Any shipping damage should be reported on SF364 Report of Discrepancy (ROD) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-64/MCO 4430.3F.

4.2.2.2 Unpack and Inventory MK. If any item is missing, fill out and forward Transportation Deficiency Report (TDR) (SF361) as described in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 450015.

4.2.2.3 Examine Each Item for Damage. If any item is damaged, fill out and forward SF364 Report of Discrepancy (ROD) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-64/MCO 4430.3F. All damages should be reported as prescribed by DA Pam 738-750, as contained in Maintenance Management Update.

4.3 MK, Distribution, and Consumables.

4.3.1 Items Supplied in MK and/or Required for Installation. Use Table 4-1 and figure 4-1 to identify and inventory MK parts supplied to install Radio Set: AN/VRC-90 Series and AN/VRC-92 Series. Refer to Table 4-2 and figure 4-2 to identify additional items required to install Radio Set AN/VRC-92 Series.

4.3.2 Distribution and Issue Instructions.

- a. US Forces: Do not requisition MK. They will be shipped automatically.
- b. US Army Depots: Requisition MK through supply channels.
- c. Multiservice: Instructions shall be included for multiservice modifications.
- d. MAP/MAS Countries: Instructions shall be provided for MAP/MAS countries.

Table 4-1. Parts List for Installation of Radio Set: AN/VRC-90 Series and AN/VRC-92 Series

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5985-01-297-2971	Antenna AS-3900/VRC (A3017899-1)	3	PAOOF A	4-1, 2
5305-00-847-1159	Screw, Cap, Hexagon (3/8-16 x 1 3/4 in) MS35307-365	12	PAOZZA	
5310-00-913-8881	Nut, Hexagon (3/8-16 in) MS51971-3	12	PAOZZA	
5310-00-061-1258	Washer, Lock, Internal/External-Toothed (3/8 in) MS45904-76	24	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	6	PAOZZA	
5306-00-225-9086	Bolt, Machine (5/16-24 x 5/8 in) MS90726-31 (Not Used)	3	PAOZZA	
5330-01-205-2864	Gasket (A3013655-1)	3	PAOZZA	
5975-01-188-8873	Mounting Base, Electrical Equipment MT-6352/VRC (A3013367-1)	2	PAOFFA	4-1, 1
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34 (5 Not Used)	10	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72 (5 Not Used)	20	PAOZZA	
5310-00-880-7746	Nut, Hexagon (5/16 - 24 in) MS51968-5 (5 Not Used)	10	PAOZZA	
5995-01-219-7034	Cable Assembly, Radio Frequency CG-3855/VRC (15 FT, 0 IN) (A3014031-7)	3	PAOZZA	4-1, 7
5995-01-219-7029	Cable Assembly, Radio Frequency CG-3855/VRC (5 FT, 0 IN) (A3014031-2)	1	PAOZZA	4-1, 7
5995-01-225-1662	Cable Assembly, Radio Frequency CG-3855/VRC (12 FT, 0 IN) (A3014031-12)	1	PAOZZA	4-1, 7
5995-01-225-1659	Cable Assembly, Radio Frequency CG-3855/VRC (2 FT, 0 IN) (A3014031-9)	1	PAOZZA	4-1, 7
5935-00-259-0205	Adapter, Connector M55339/20-00201	6	PAOZZA	4-1, 3
5340-00-988-1162	Clamp, Loop (5/8-5/16 in) MS21333-113	2	PAOZZA	
4020-01-341-8795	Fiber Rope Assembly-Single Leg (A3167672-1)	3	PAOZZA	4-1, 6
	Lead, Electrical - Ground Strap (A3013552-5)	1	XBOZZA	4-1, 4
5310-00-880-7744	Nut, Hexagon (5/16-18 in) MS51967-5	10	PAOZZA	
	Plate, Mounting (A3014089-1)	1	XBOZZA	4-1, 5
5305-00-984-7353	Screw, Machine, Flat-Head (5/16-24 x 3/4 in) MS35191-306	4	PAOZZA	
5305-00-146-2524	Screw, Tapping, Hex-Head (1/4-14 x 3/4 in) MS51850-86	1	PAOZZA	
5975-00-111-3208	Strap, Tiedown, Electrical Components MS3367-5-9	20	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	5	PAOZZA	
5310-00-889-2528	Washer, Lock, Internal/External-Toothed (1/4 in) MS45904-68	2	PAOZZA	

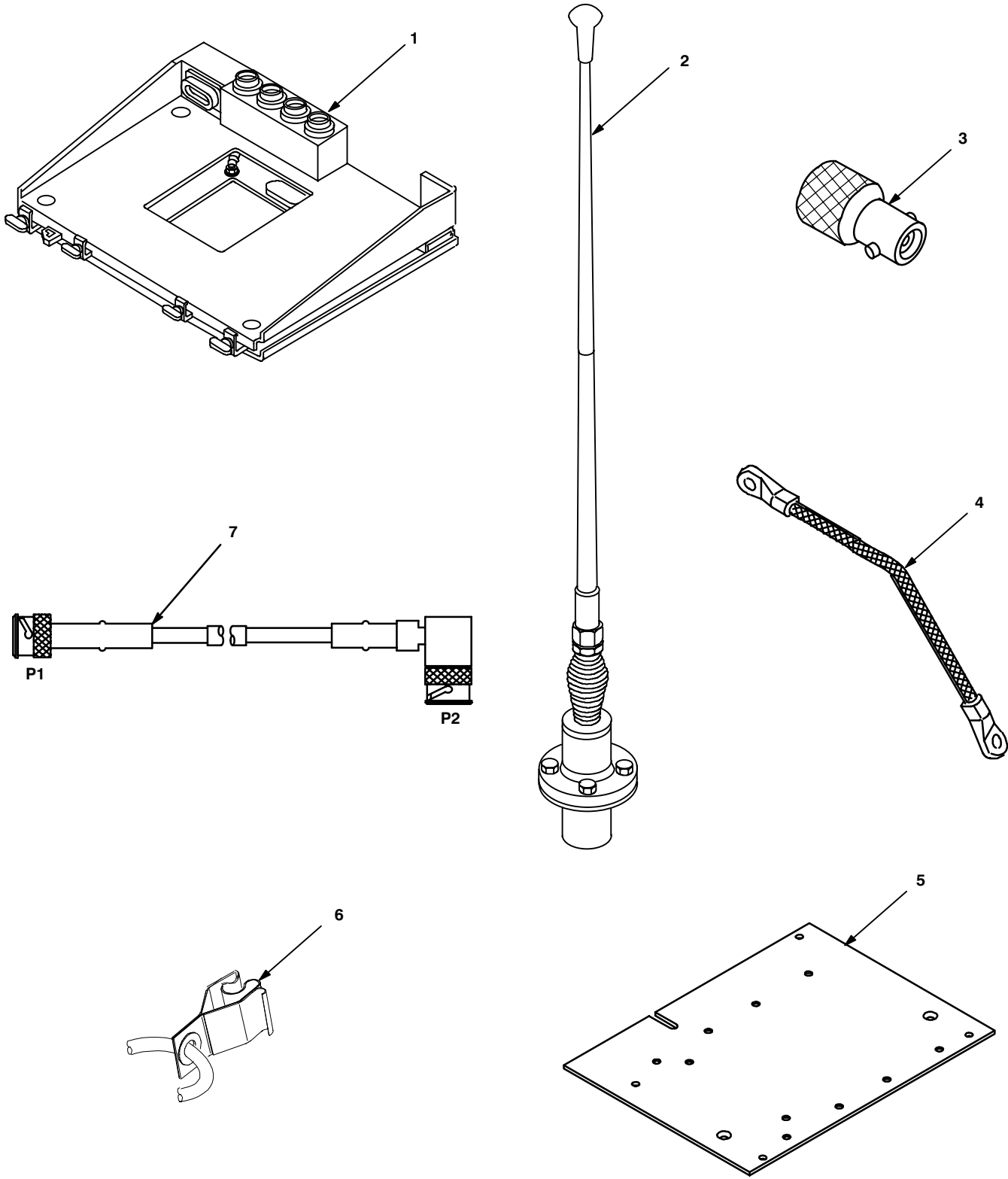


Figure 4-1. MK Illustrated Parts List

Table 4-2. Additional Items Required for Installation of Radio Set AN/VRC-92 Series

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5975-01-235-1962	Mounting Base, Electrical Equipment MT-6353/VRC (A3014053-1)	1	PAOOHA	4-2, 1
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34 (Not Used)	4	PAOZZA	
5310-00-880-7746	Nut, Hexagon (5/16-24 in) MS51968-5	2	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72 (3 Not Used)	6	PAOZZA	
5310-00-081-4219	Washer, Flat (5/16 in) MS27183-12 (Not Used)	2	PAOZZA	
5975-00-111-3208	Nut Strip (A3014064-1)	1	XBOZZA	4-2, 5
	Strap, Tiedown, Electrical Components, MS3367-5-9	4	PAOZZA	
5995-01-300-9324	Cable Assembly, Power, Electrical CX-13303/VRC (4 FT, 6 IN) (A3014040-9)	1	PAOZZA	4-2, 4
5995-01-222-4209	Cable Assembly, Special Purpose, Electrical CX-13291/VRC (3 FT, 0 IN) (A3014037-1)	1	PAOZZA	4-2, 2
5995-01-219-7025	Cable Assembly, Radio Frequency CG-3856/VRC (5 FT, 0 IN) (A3014032-3)	1	PAOZZA	4-2, 3

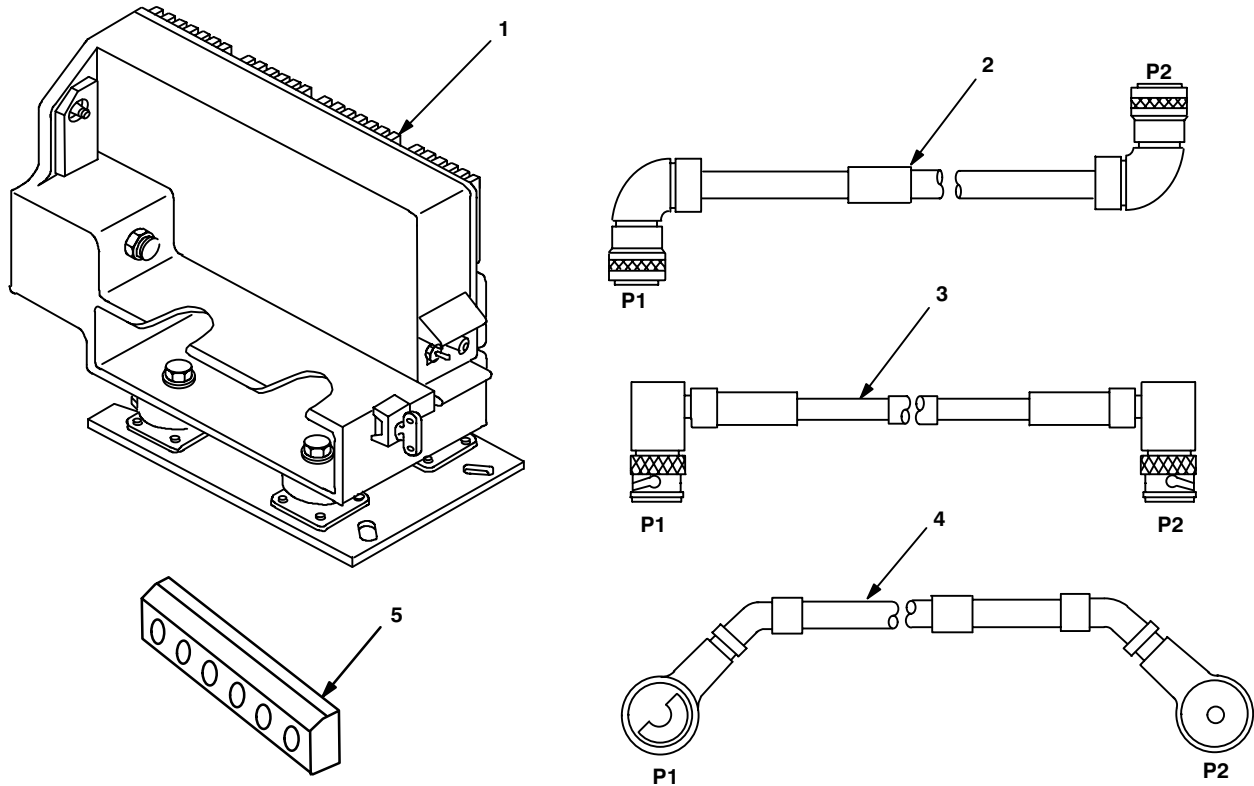


Figure 4-2. Illustrated Parts List for Table 4-2

4.3.3 Consumable Materials. The table below lists materials required for installation but not supplied with MK.

NSN	NOMENCLATURE
8040-00-117-8510	Adhesive-Sealant, Clear, RTV
6850-00-880-7616	Silicone Compound, MIL-S-8660
8030-00-292-1102	Conductive Anti-seize Compound

4.4 Tools and Test, Measurement and Diagnostic Equipment (TMDE) Required. The following tools and TMDE are needed for installation.

NOMENCLATURE	NSN	QUANTITY
Radio Set*		1
Electric Grinder or Equivalent		1
Pocket Knife, Electrician's	5110-00-240-5943	1
Screwdriver, No. 2 Point Phillips, 4 in	5120-00-234-8913	1
Screwdriver, 1/4 in Flatblade, 4 in	5120-00-222-8852	1
Pliers, Round Nose	5120-00-240-6172	1
Pliers, Diagonal Cutting	5110-00-965-0974	1
Wrench, Open/Box: 1/2 in	5120-00-228-9506	1
9/16 in	5120-00-228-9507	1
Handle, Socket Wrench	5120-00-240-5364	1
Socket: 3/8 in	5120-00-227-6702	1
1/2 in	5120-00-237-0977	1
9/16 in	5120-00-227-6704	1
Electric Drill		1
Drill Bits: 3/16	5130-00-889-8994	1
Size 1 (.228 in)	5133-00-189-9246,	1

* Use radio issued with your shelter if available.

5. INSTALLATION PROCEDURES

This section describes where and how to install MK items in the shelter. See figure 5-1 for an overall view of where the MK equipment, as well as radio components, typically will be installed. When installing MK equipment, be sure to read and follow instructions and illustrations carefully. To install MT-6353/VRC mounting base, see section 5.4 for instructions.

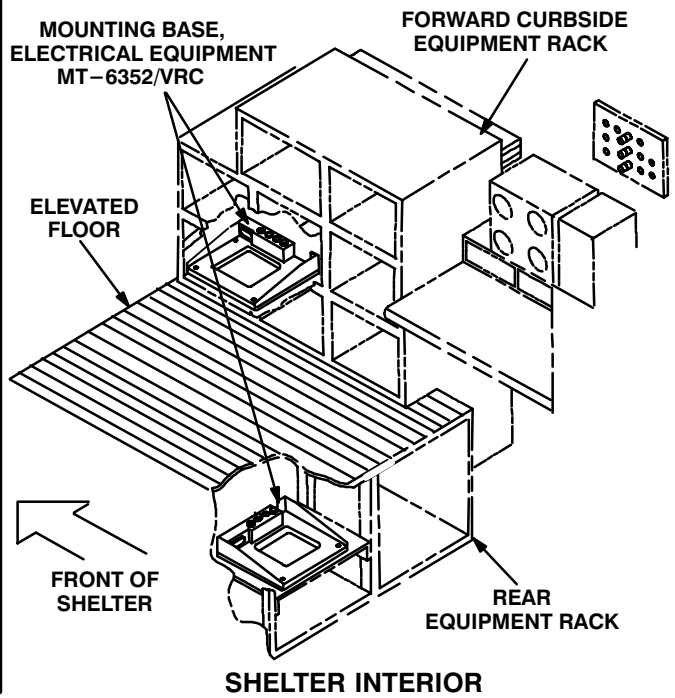
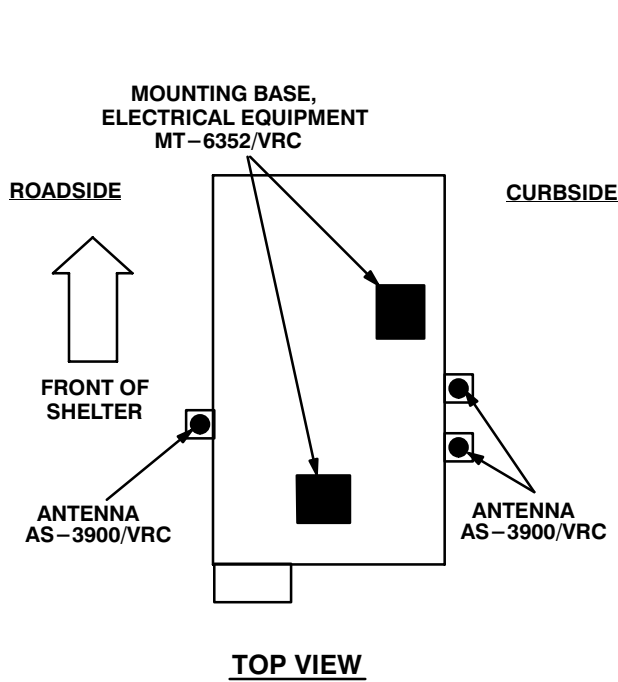
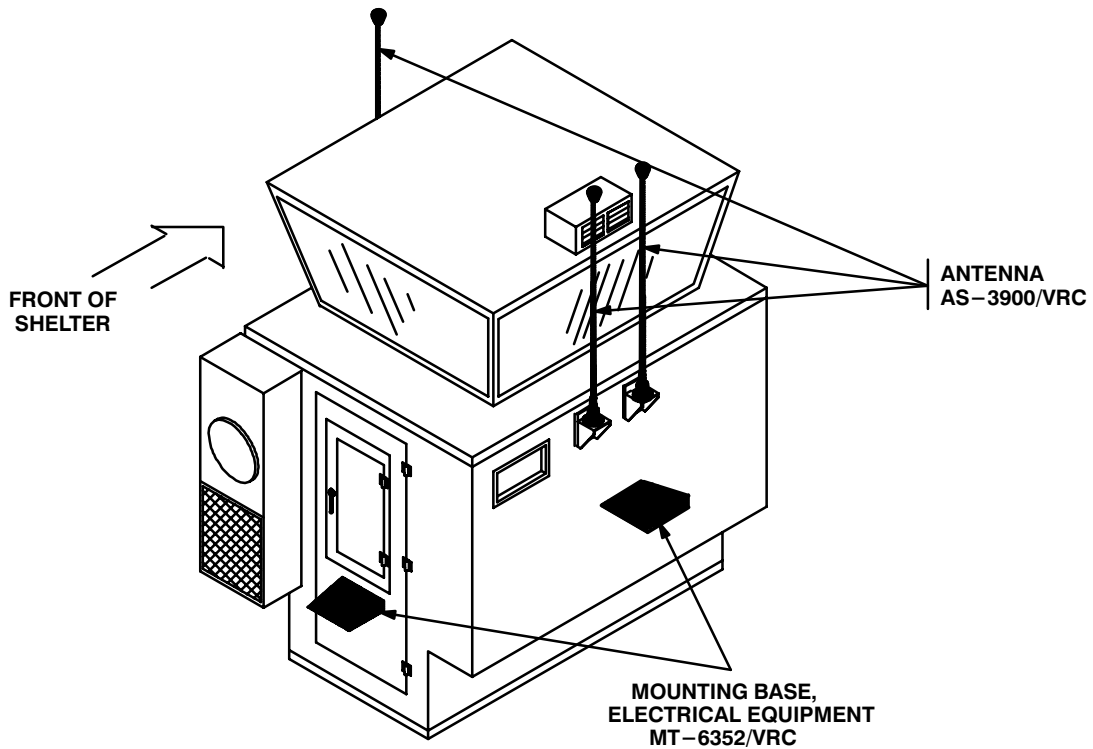


Figure 5-1 (1). MK and Radio Installation: MK Equipment Locations

5. INSTALLATION PROCEDURES. Continued

**INSTALLATION
FOR AN/VRC-90 Series
AND AN/VRC-92 Series**

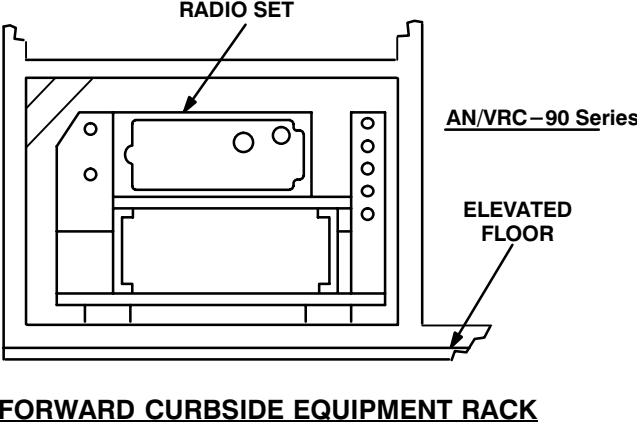
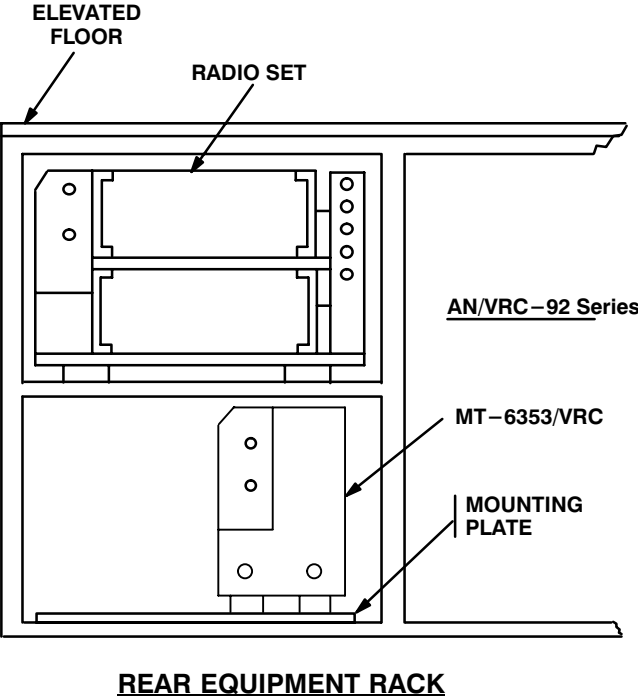


Figure 5-1 (2). MK and Radio Installation: Radio Equipment Locations

5.1 Installation of Antenna AS-3900/VRC (antenna). Perform the following steps to install all three antennas. See figure 5-1 (1) for location.

5.1.1 Installation of Antenna Base.

ITEM	ACTION	REMARKS
------	--------	---------

NOTE

Apply a thin coat of adhesive-sealant to both sides of each internal/external-toothed (IET) washer during installation, and to the area of contact where IET washer is to be placed.

- | | | |
|--|---|--|
| a. Gasket (4). | Place on existing antenna bracket and align mounting holes. See figure 5-2. | |
| b. Antenna base (1). | Place on top of gasket (4) and antenna bracket; then align mounting holes. | |
| c. Four cap screws (2), eight IET washers (3) and four nuts (5). | Install and secure to antenna base (1) and antenna bracket. | Tools: 9/16 in socket and 9/16 in open/box wrench. |
| d. Ground strap (7), two IET washers (6) and existing bolt. | Install and secure to bottom right mounting hole in antenna bracket and wall. | |

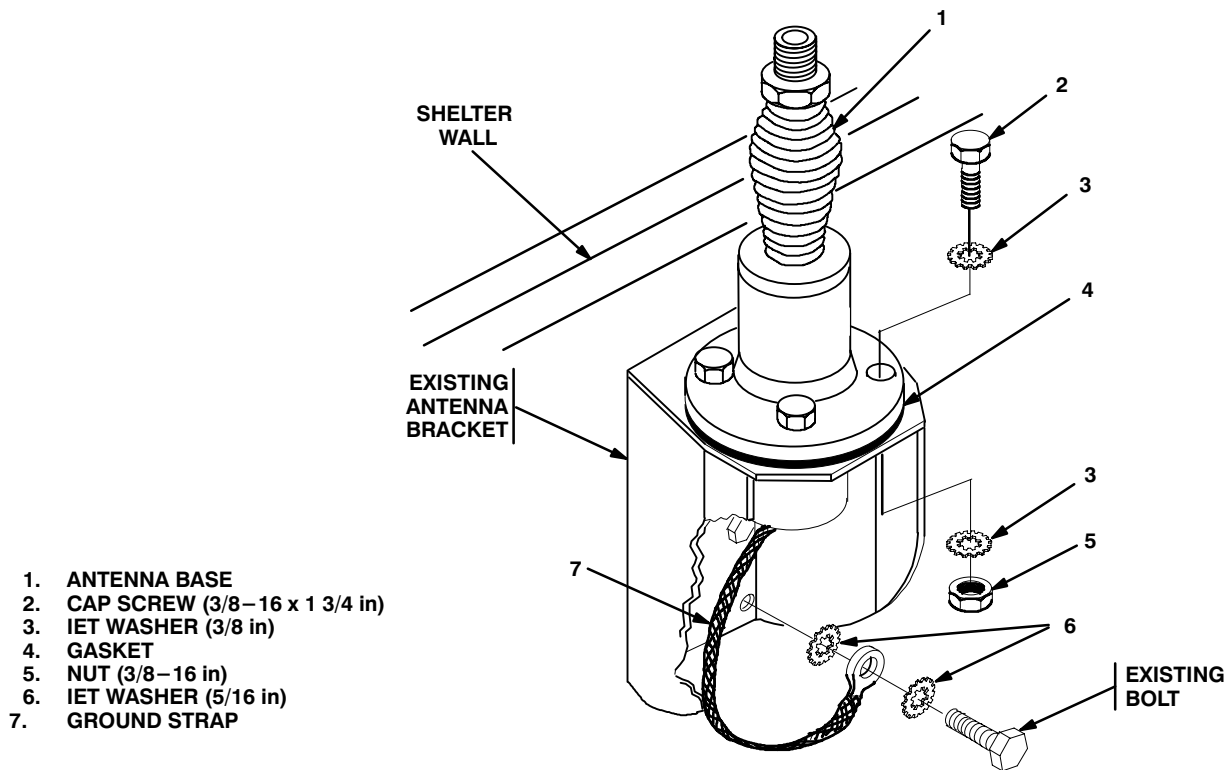
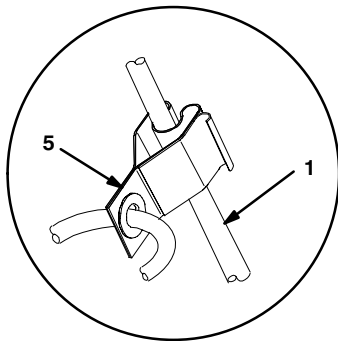


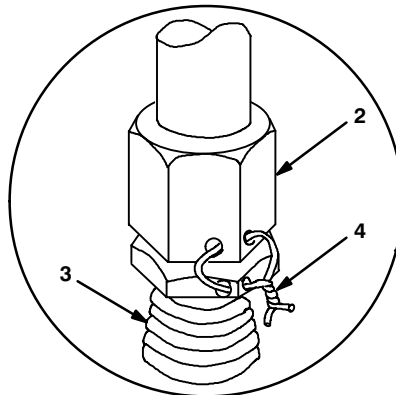
Figure 5-2. Antenna Base Installation: Curbside and Roadside Shelter Walls

5.1.2 Installation of Top Antenna Assembly. The top portion of the antenna includes a lower element and an upper element (with installed cap). Use the following procedure to assemble, install and tie down all antennas.

ITEM	ACTION	REMARKS
a. Antenna elements (1, 2).	Apply silicone compound to element threads and assemble. See figure 5-3.	
b. Antenna element (2).	Install and hand-tighten to antenna base (3).	
c. Lock wire (4).	Install to antenna element (2) and antenna base (3). See figure 5-3, detail A.	
d. Fiber rope assembly (5).	Attach clip to antenna element (1). Tie rope to vehicle to position antenna in desired location. See figure 5-3, detail B.	



DETAIL B



DETAIL A

- 1. ANTENNA ELEMENT (UPPER)
- 2. ANTENNA ELEMENT (LOWER)
- 3. ANTENNA BASE
- 4. LOCK WIRE
- 5. FIBER ROPE ASSEMBLY

Figure 5-3. Top Antenna Assembly Installation

5.2 Installation of Mounting Base, Electrical Equipment MT-6352/VRC (mounting base). Remove and retain attaching bag of 5/16 in mounting hardware for installation. To insure good electrical grounding, any rust, corrosion or paint around mounting holes in equipment shelf should be removed before installing mounting bases. See figure 5-4 (1) and perform steps a thru f to install forward curbside mounting base. Perform steps g thru i and see Figure 5-4 (2) to install rear mounting base.

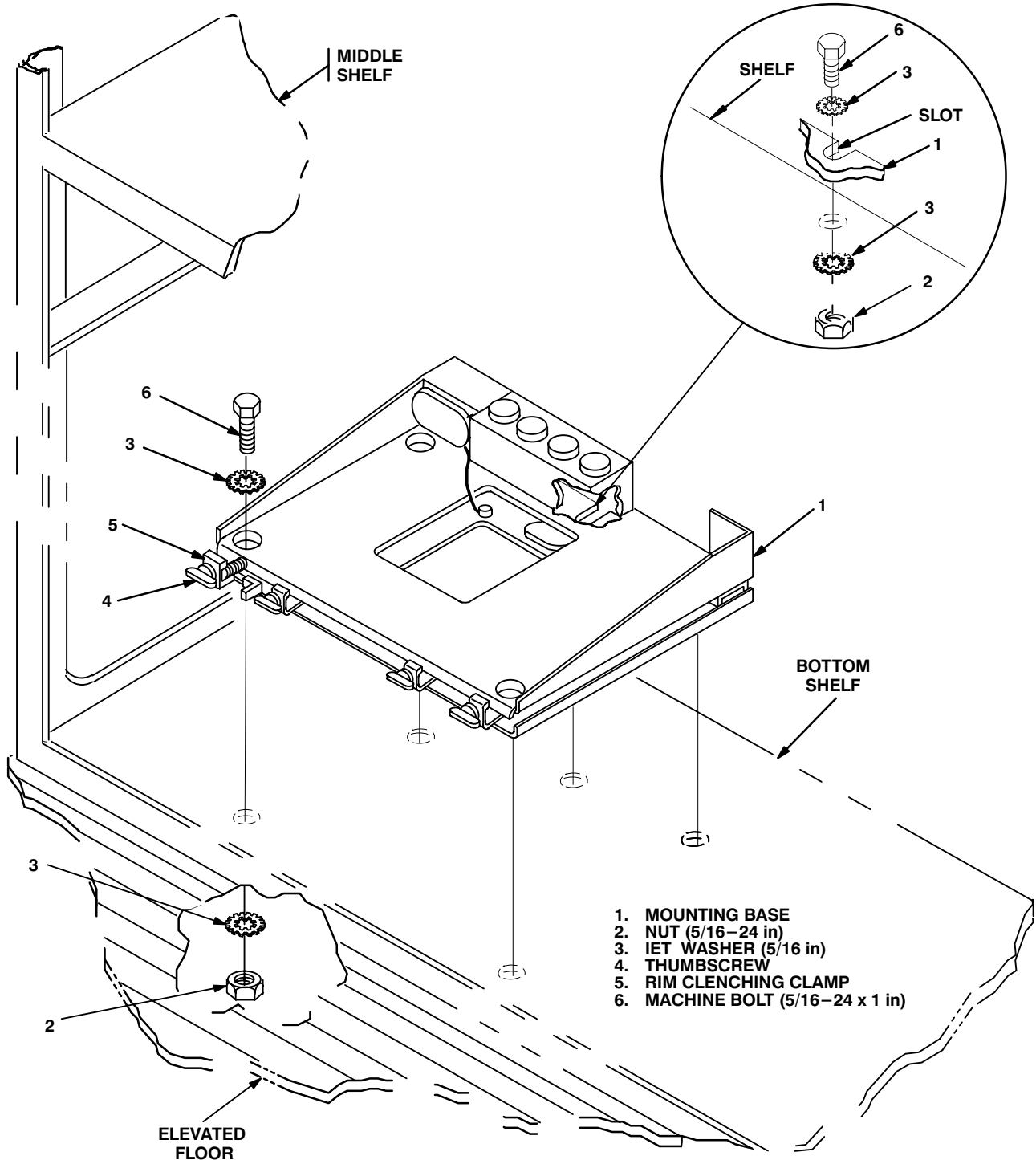


Figure 5-4 (1). Mounting Base Installation: Forward Curbside Equipment Rack

5.2 Installation of Mounting Base, Electrical Equipment MT–6352/VRC (mounting base). Continued

ITEM	ACTION	REMARKS
NOTE		
Apply a thin coat of adhesive–sealant to both sides of each internal/external–toothed (IET) washer during installation, and to the area of contact where IET washer is to be placed.		
a. Mounting base (1) and existing bottom radio shelf.	Remove a 2” square area of paint on the underside of the mounting base (1) around left front and rear mounting holes. Remove a 2” square area of paint on the existing bottom radio shelf around the existing mounting holes that mate with left front and rear mounting holes of mounting base (1). Clean the paint removed areas and apply a thin coat of conductive anti–seize compound.	Tools: Electric grinder or equivalent.
b. Mounting base (1).	Place on radio shelf. See Figure 5–4 (1).	
c. Two outer thumbscrews (4).	Turn ccw until both sets of threads have cleared center of holes.	
d. Mounting base (1).	Align four holes and rear slot with matching hole pattern in shelf.	
e. Five machine bolts (6), ten IET washers (3) and five nuts (2).	Install and secure to mounting base (1) and radio shelf.	Tools: 1/2 in socket and 1/2 in open/box wrench.
f. Two outer thumbscrews (4).	Tighten and secure to rim clenching clamps (5) and mounting base (1).	
g. Existing bracket (and cable if installed).	Remove from upper radio shelf. See Figure 5–4 (2).	Cable not shown.
h. Mounting base (1) and existing upper radio shelf.	Remove a 2” square area of paint on the underside of the mounting base (1) around left front and rear mounting holes. Remove a 2” square area of paint on the existing upper radio shelf around the existing mounting studs that mate with left front and rear mounting holes of mounting base (1). Clean the paint removed areas and apply a thin coat of conductive anti–seize compound.	Tools: Electric grinder or equivalent.
i. Two outer thumbscrews (2).	Turn ccw until both sets of threads have cleared center of holes.	
j. Mounting base (1).	Place on shelf over existing studs.	
k. Five nuts (5) and five IET washers (4).	Install and secure to mounting base (1) and shelf.	Tools: 1/2 in open/box wrench.
l. Two outer thumbscrews (2).	Tighten and secure to rim clenching clamps (3) and mounting base (1).	

5.2 Installation of Mounting Base, Electrical Equipment MT-6352/VRC (mounting base). Continued

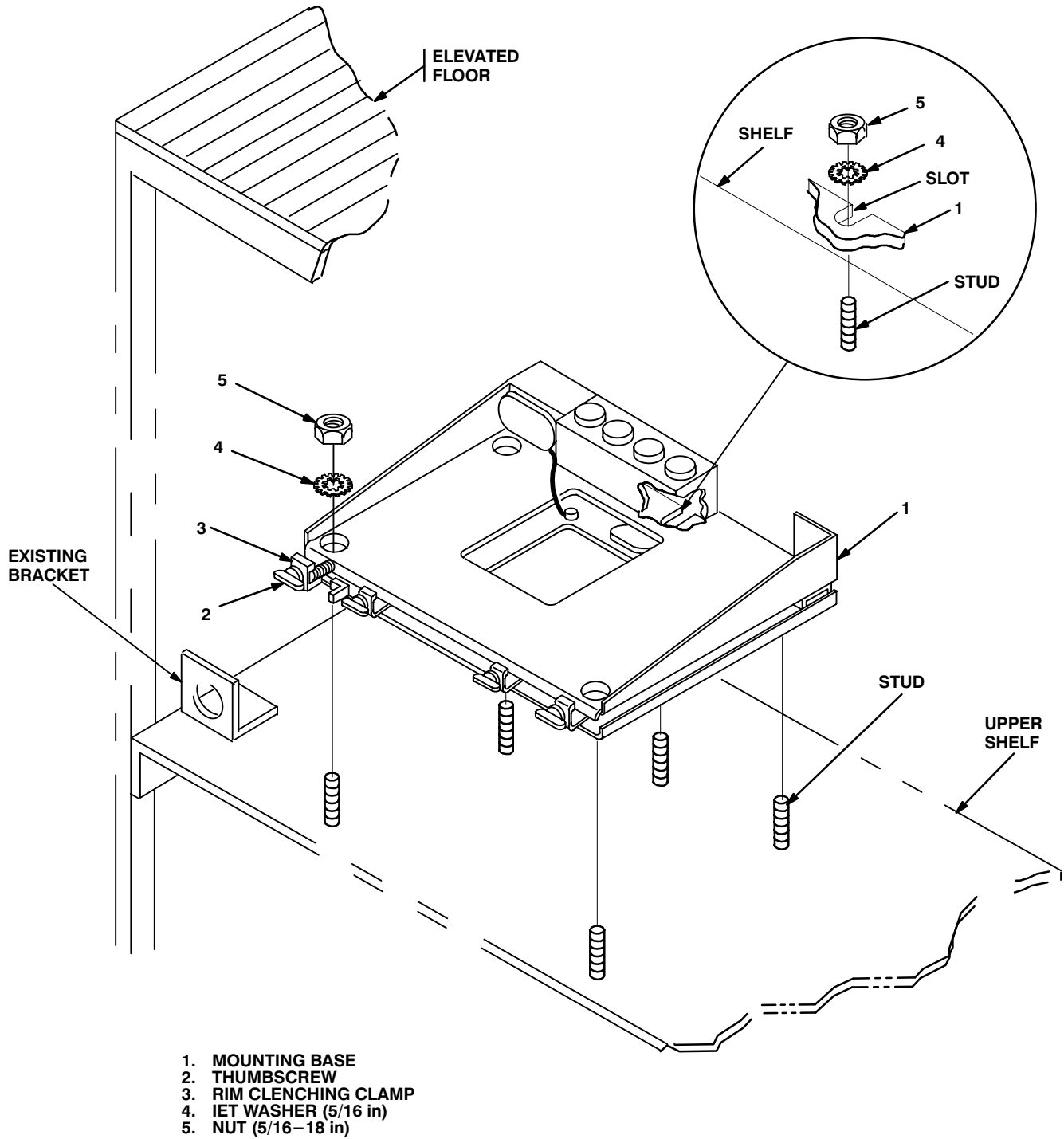


Figure 5-4 (2). Mounting Base Installation: Rear Equipment Rack (Below Elevated Floor)

5.3 Installation of Cables. To accomplish the installation, leave loop clamps and tiedown straps loose enough to adjust cable slack and allow easy adjustment of equipment. When installation is complete, tighten and secure clamps and tiedown straps.

WARNING

Make sure shelter power source is positioned OFF or disconnected before installing cables.

ITEM	ACTION	REMARKS
a. Three connector adapters (7).	Connect and secure to antenna entry panel connectors FM-1, FM-2 and FM-3. See figure 5-5 (1) and figure 5-5 (1), detail A.r	

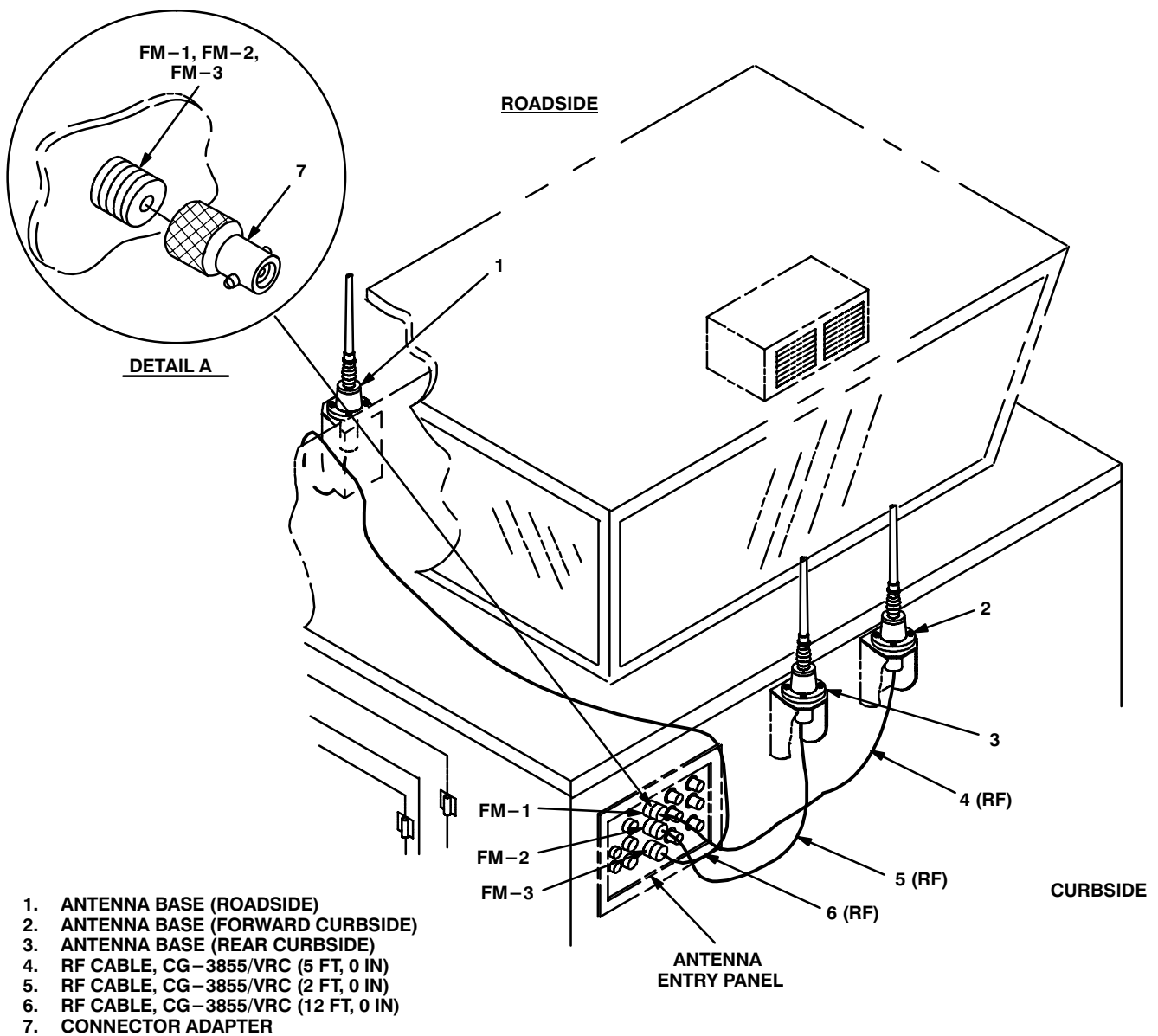


Figure 5-5 (1). Cable Installation: Exterior Cabling

5.3 Installation of Cables. Continued

ITEM	ACTION	REMARKS
b. RF cable (6) connector P1.	Connect and secure to antenna base (1) connector J1. See figure 5–5 (1).	
c. RF cable (6).	Route across top of shelter to antenna entry panel.	
d. RF cable (6) connector P2.	Connect and secure to connector adapter (7) installed to antenna entry panel connector FM–3.	
e. RF cable (5) connector P1.	Connect and secure to antenna base (3) connector J1.	
f. RF cable (5) connector P2.	Connect and secure to connector adapter (7) installed to antenna entry panel connector FM–2.	
g. RF cable (4) connector P1.	Connect and secure to antenna base (2) connector J1.	
h. RF cable (4) connector P2.	Connect and secure to connector adapter (7) installed to antenna entry panel connector FM–1.	
i. Three connector adapters (3).	Connect and secure to antenna entry panel connectors FM–1, FM–2 and FM–3. See figure 5–5 (2) and figure 5–5 (2), detail A.	
j. RF cable (1) connector P1.	Connect and secure to connector adapter (3) installed to antenna entry panel connector FM–1. See figure 5–5 (2).	
k. RF cable (5) connector P1.	Connect and secure to connector adapter (3) installed to antenna entry panel connector FM–3.	
l. RF cable (7) connector P1.	Connect and secure to connector adapter (3) installed to antenna entry panel connector FM–2.	
m. RF cables (1, 5, 7).	Route along wall to forward edge of curbside equipment rack.	
n. Two loop clamps (2) and existing mounting hardware.	Wrap clamps around RF cables (1, 5, 7); then install to existing holes in curbside wall. See figure 5–5 (2) for location(s).	
o. RF cable (7) connector P2.	Position on top of mounting base (8). See figure 5–5 (2).	
p. RF cables (1, 5).	Route below elevated floor to rear equipment rack.	

5.3 Installation of Cables. Continued

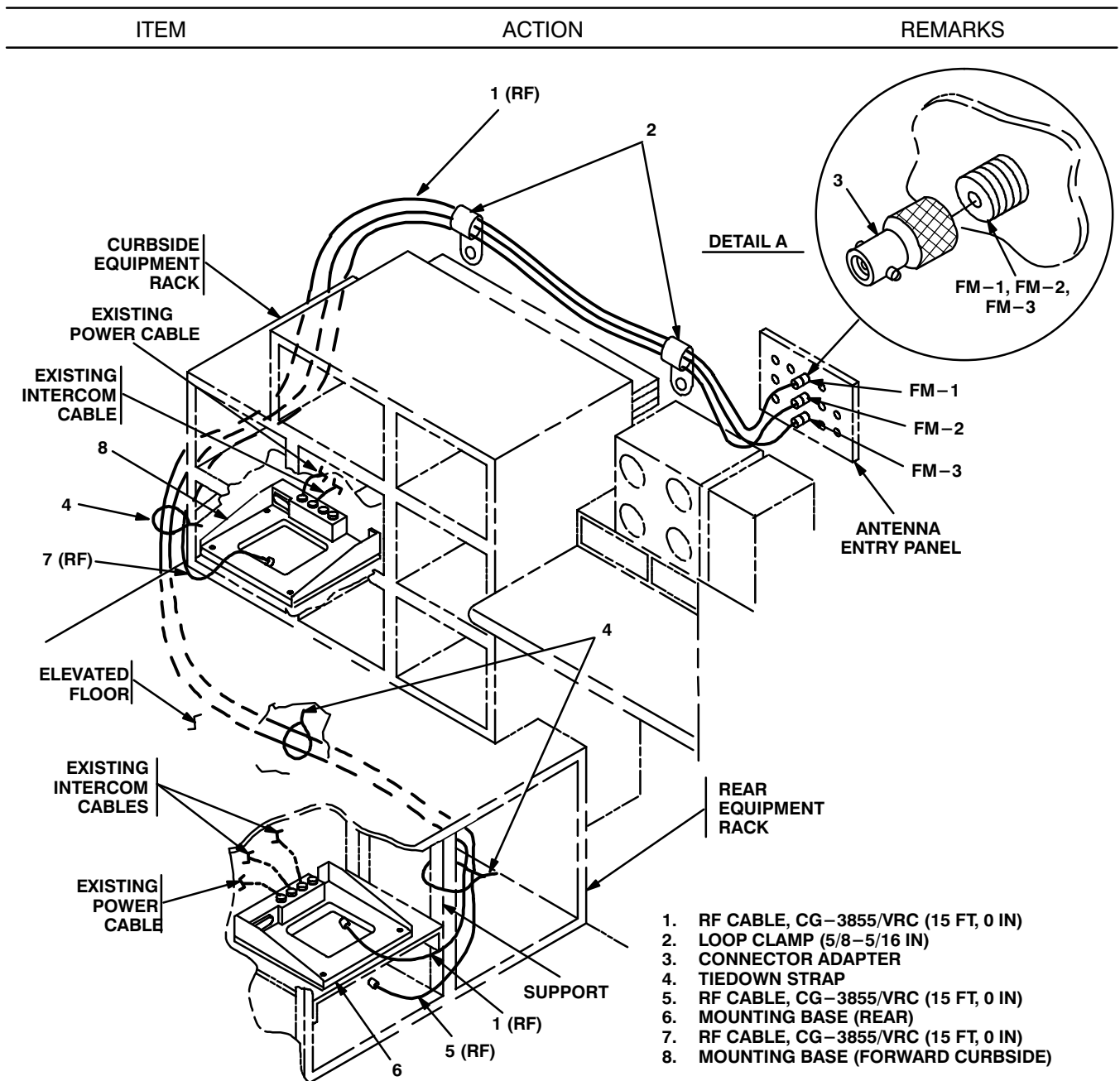


Figure 5-5 (2). Cable Installation: Interior Cabling

- q. Tiedown strap (4). Install loosely around RF cables (1, 5, 7) near forward edge of curbside equipment rack. See figure 5-5 (2) for location(s).
- r. Tiedown strap (4). Install loosely around RF cables (1, 5) below elevated floor.
- s. RF cable (1) connector P2. Position on top of mounting base (6). See figure 5-5 (2).

5.3 Installation of Cables. Continued

ITEM	ACTION	REMARKS
t. RF cable (5) connector P2.	Position on lower shelf of rear equipment rack. See figure 5–5 (2).	
u. Tiedown strap (4).	Wrap around RF cables (1, 5); then install loosely to rear equipment rack support. See figure 5–5 (2) for location(s).	
v. Two existing intercom cables (rear).	Connect and secure to mounting base (6) connectors J3 and J4. See figure 5–5 (2).	
w. Existing power cable (rear).	Connect and secure to mounting base (6) connector J1.	
x. Existing intercom cable (forward curbside).	Connect and secure to mounting base (8) connector J3.	
y. Existing power cable (forward curbside).	Connect and secure to mounting base (8) connector J1.	

5.4 Installation of Mounting Base, Electrical Equipment MT-6353/VRC. Use the following procedure to install MT-6353/VRC mounting base in the location shown in figure 5-1 (2). Refer to section 5.5 for connection of cables.

ITEM	ACTION	REMARKS
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NOTE

Apply a thin coat of adhesive-sealant to both sides of each internal/external-toothed (IET) washer during installation, and to the area of contact where IET washer is to be placed. Before proceeding, connect and secure CX-123291/VRC control cable and CX-13303/VRC power cable to MT-6353/VRC mounting base. (Refer to Section 5.5, step b.)

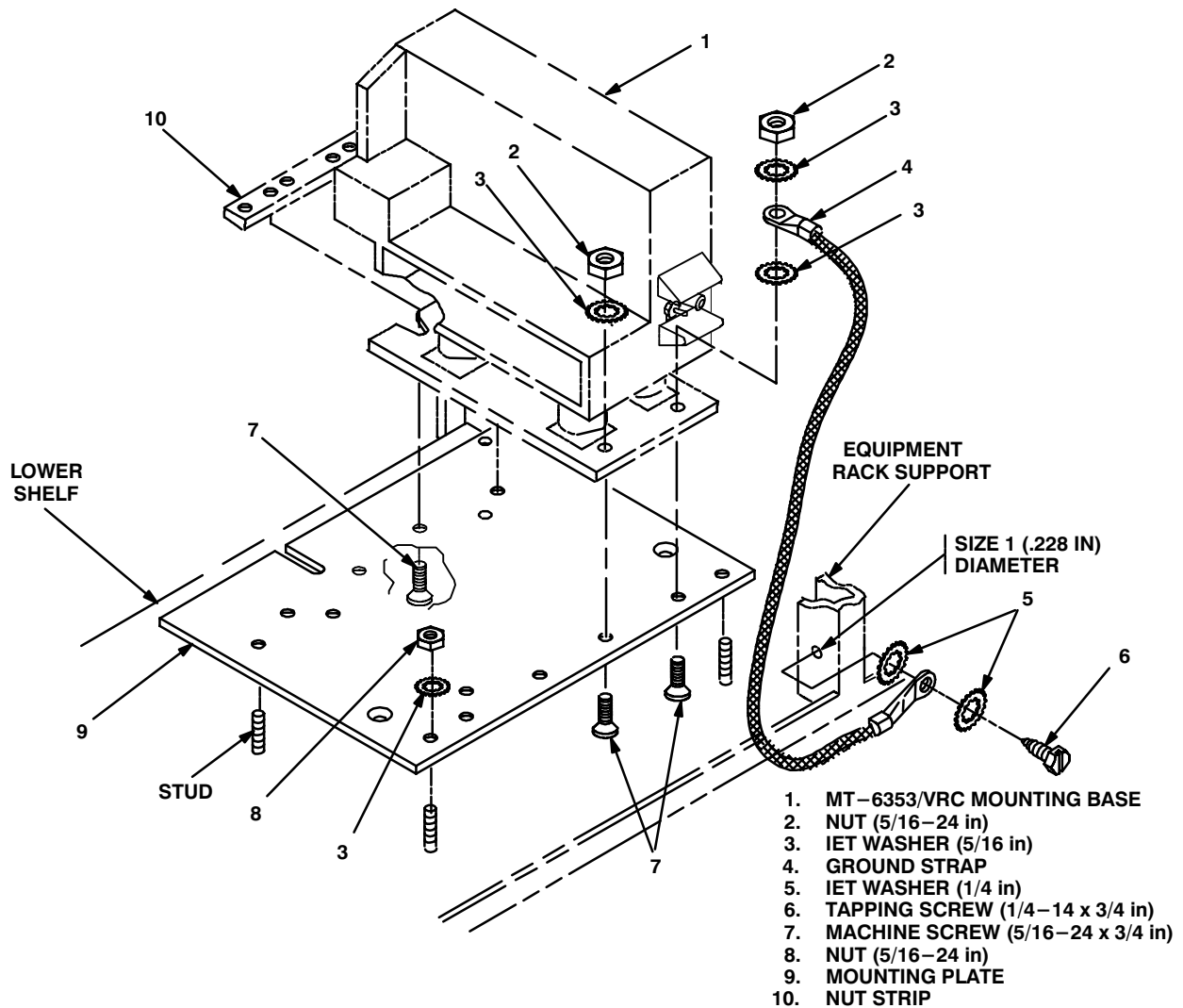


Figure 5-6. MT-6353/VRC Mounting Base Installation: Equipment Shelf

5.4 Installation of Mounting Base, Electrical Equipment MT–6353/VRC. Continued

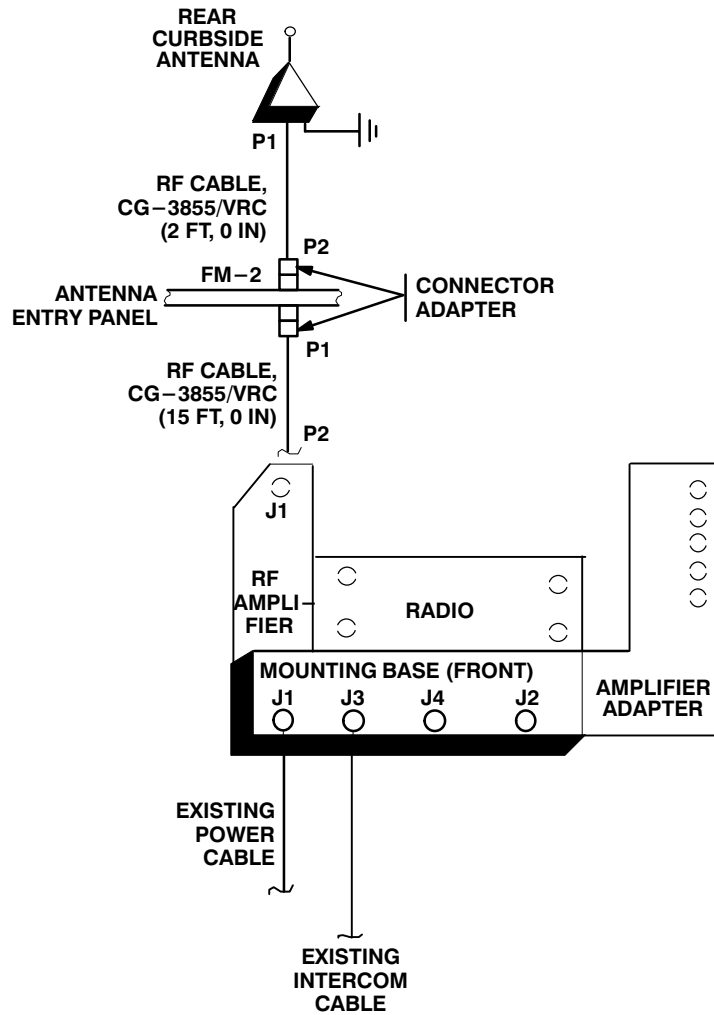
ITEM	ACTION	REMARKS
a. MT–6353/VRC mounting base (1), mounting plate (9) and existing lower radio shelf.	Remove a 2” square area of paint on the underside of the mounting base (1) around front two mounting holes. Remove a 2” square area of paint on top side of mounting plate (9) around two existing mounting holes of mounting base (1). Remove a 2” square area of paint around five existing mounting studs on lower shelf. Remove a 2” square area of paint on the underside of mounting plate (9) around five existing mounting holes that mate with existing mounting studs on lower shelf. Clean the paint removed areas and apply a thin coat of conductive anti–seize compound.	Tools: Electric grinder or equivalent.
b. MT–6353/VRC mounting base (1).	Place on mounting plate (9) over existing holes. See Figure 5–6.	
c. MT–6353/VRC mounting base (1).	Align front holes and rear slots with matching plate (9).	
d. Two flat–head machine screws (7) and nut strip.	Install and secure to rear slots in MT–6353/VRC mounting base (1) and mounting plate (9).	Tools: Phillips screwdriver.
e. Ground strap (4), two flat–head machine screws (7), three IET washers (3), and two nuts (2).	Install and secure to front holes in MT–6353/VRC mounting base (1) and mounting plate (9).	Tools: Phillips screwdriver and 1/2 in open/box wrench.
f. Mounting hole for ground strap (4).	Drill a Size 1 (.228 in) diameter hole in equipment rack support. See Figure 5–6 for approximate locations.	Tools: Electric drill and Size 1 drill bit.
g. Mounting plate (9).	Place on lower shelf; then align mounting holes over existing studs.	
h. Five nuts (8) and five IET washers (3).	Install and secure to mounting plate (9) and existing studs.	Tools: 1/2 in socket.
i. Ground strap (4), hex–head tapping screw (6) and two IET washers (3).	Install and secure to hole drilled in step f.	Tools: 3/8 in socket.

5.5 Post–Installation and Checkout. After equipment is installed and cables are connected, perform the following steps.

ITEM	ACTION	REMARKS
a. Equipment.	Check for secure mounting. Check for loose parts, connectors and mounting hardware.	
b. Cables.	Check for proper installation and connection of cables. See figure 5–7 for cable connections. Unused cables should be stowed in appropriate place inside the shelter.	
c. Loop clamps.	Check that all have been properly installed and tightened.	
d. Protective covers.	Insure that all installed cables are covered when not in use or connected.	
e. Radio issued with shelter.	Install and connect cables. See TM 11–5820–890–20–1 or TM 11–5820–890–20–2 for installation and Operational (OP) Check instructions.	
f. MK line replaceable units.	See TM 11–5820–890–20P for Repair Parts and Special Tools List (RPSTL) information.	

5.6 Post-Installation and Checkout. Continued

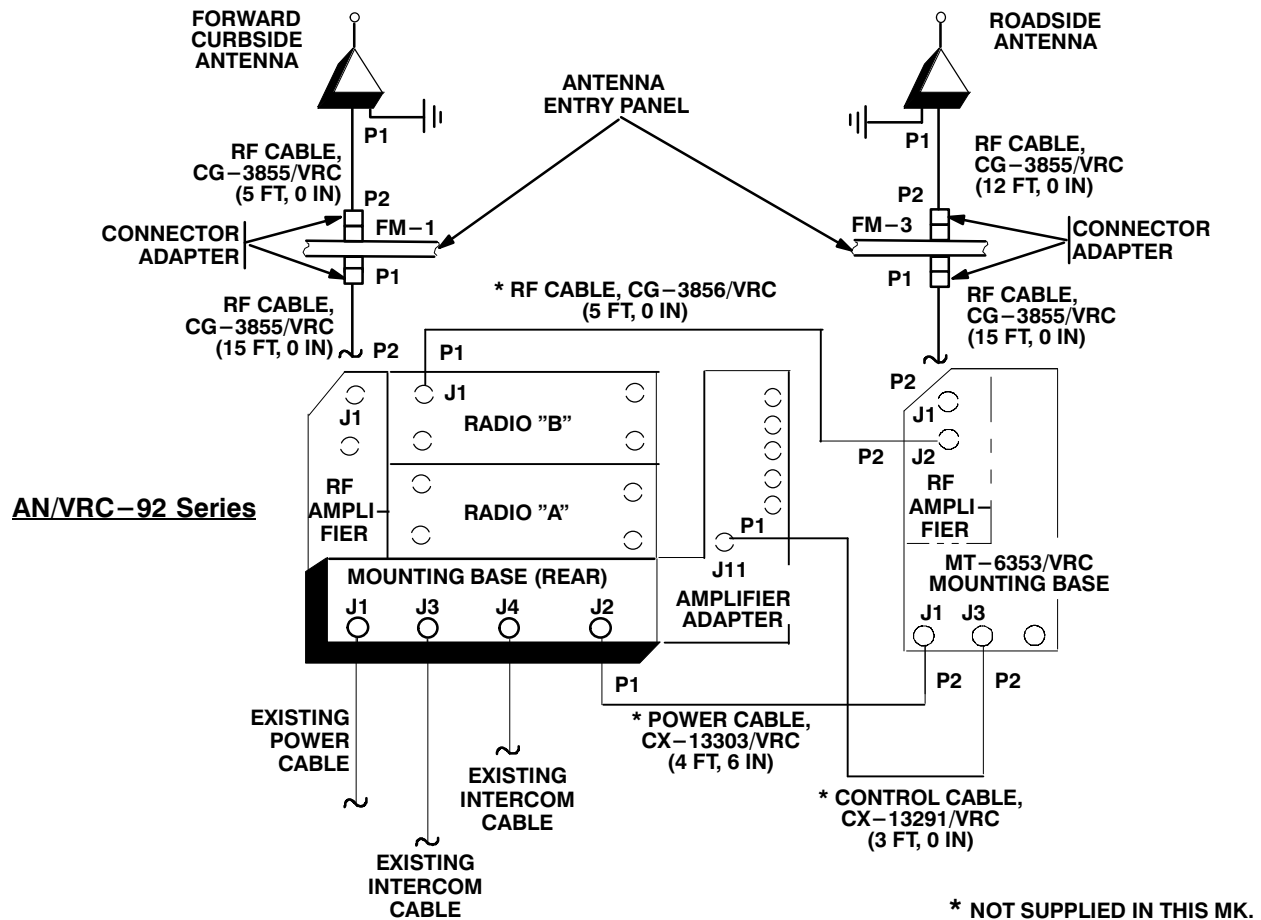
AN/VRC-90 Series



CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CG-3855/VRC (2 FT, 0 FT)	P1	Rear curbside antenna base	J1	P2	Antenna entry panel	FM-2
CG-3855/VRC (15 FT, 0 FT)	P2	RF amplifier	J1	P1	Antenna entry panel	FM-2
Existing power cable		Power supply			Mounting base	J1
Existing intercom cable		Intercom unit			Mounting base	J3

Figure 5-7. Cable Diagram: For AN/VRC-90 Series and AN/VRC-92 Series

5.6 Post-Installation and Checkout. Continued



CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CG-3855/VRC (12 FT, 0 IN)	P1	Roadside antenna base	J1	P2	Antenna entry panel	FM-3
CG-3855/VRC (15 FT, 0 IN)	P2	RF amplifier (mounting base)	J1	P1	Antenna entry panel	FM-3
CG-3855/VRC (5 FT, 0 IN)	P1	Forward curbside antenna base	J1	P2	Antenna entry panel	FM-1
CG-3855/VRC (15 FT, 0 IN)	P2	RF amplifier (MT-6353/VRC)	J1	P1	Antenna entry panel	FM-1
Existing power cable		Power supply			Mounting base	J1

Figure 5-7. Cable Diagram: For AN/VRC-90 Series and AN/VRC-92 Series Continued

5.6 Post-Installation and Checkout. Continued

CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
Existing intercom cable		Intercom unit			Mounting base	J3
Existing intercom cable		Intercom unit			Mounting base	J4
* CX-13291/VRC (3 FT, 0 IN)	P1	Amplifier-adapter	J11	P2	MT-6353/VRC mounting base	J3
* CG-3856/VRC (5 FT, 0 IN)	P1	Radio "B"	J1	P2	RF amplifier (MT-6353/VRC)	J2
* CX-13303/VRC (4 FT, 6 IN)	P1	Mounting base	J2	P2	MT-6353/VRC mounting base	J1

* Not supplied in this MK.

Figure 5-7. Cable Diagram: For AN/VRC-90 Series and AN/VRC-92 Series Continued

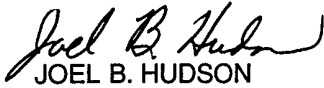
APPENDIX A

REFERENCES

AMDF	Army Master Data File (Microfiche)
AR 710-2	Supply Policy Below the Wholesale Level as Contained in Unit Supply UPDATE
AR 725-50	Requisitioning, Receipt and Issuing System in UPDATE
DA Pam 25-30	Consolidated Index of Army Publications (Microfiche)
DA Pam 710-2-1	Using Unit Supply System Manual Procedures as Contained in Unit Supply UPDATE
SB 11-131-2	Vehicular Radio Sets and Authorized Installations (SINCGARS)
TM 11-5820-890-10-1	Operator's Manual (ICOM Radio Sets)
TM 11-5820-890-10-3	Operator's Manual (Non-ICOM Radio Sets)
TM 11-5820-890-20-1	Unit Maintenance Manual (ICOM Radio Sets)
TM 11-5820-890-20-2	Unit Maintenance Manual (Non-ICOM Radio Sets)
TM 11-5820-890-20P	Repair Parts and Special Tools List

By Order of the Secretary of the Army:

Official:



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*Administrative Assistant to the
Secretary of the Army*

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BE EXACT PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO	
2-25	2-28			<p>Recommend that the installation antenna alignment procedure be changed throughout to specify a 20 IFF antenna lag rather than 10</p> <p>REASON: Experience has shown that with only a 10 lag, the antenna servo system is too sensitive to gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 20 without degradation of operation.</p>
3-10	3-3		3-1	<p>Item 5, Functional column. Change <input type="checkbox"/> 2 dB" to <input type="checkbox"/> 3 dB".</p> <p>REASON: The adjustment procedure for the TRANS POWER FAULT indicator call for a 3 dB (500 watts) adjustment to light the TRANS POWER FAULT indicator.</p>
5-6	5-8			<p>Add new step f.1 to read, <input type="checkbox"/> Replace cover plate removed in step d above."</p> <p>REASON: To replace the cover plate.</p>
		FO-3		<p>ZONE C 3. On J1-2, change <input type="checkbox"/> +24 VDC" to <input type="checkbox"/> +5 VDC".</p> <p>REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.</p>

SAMPLE

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